

REVIEWS

Edited by G. W. JOHNSTONE

BOOKS

Birds of Western Australia by D. L. Serventy and H. M. Whittell (5th ed.), 1976. Perth: Univ. West. Aust. Press. Pp 481, col. pll 9, b. & w. figs 64, map. 145 x 225 mm. \$A17.50.

The format of this edition is like previous ones, the main section dealing with identification, distribution and nesting of 400 species. One coloured plate (that of the Turquoise and Splendid Wrens), nine black-and-white figures and twenty-four species have been added. As in previous editions, the Kimberley Division is still excluded; its inclusion would involve only about seventy-six species (as listed on p. 48). Accolades bestowed by previous reviewers (Emu 48: 246; 52: 69; 63: 80) remain valid.

Evidence to justify the inclusion of some of the twenty-four extra species is based on unpublished or poorly substantiated observations. Thus the White-winged Chough *Corcorax melanocephalus* recorded from the western Nullarbor region is possibly referable to *Strepera versicolor*. Certainly the recording of the White Wagtail *Motacilla alba* (West. Aust. Nat. 13: 64) does not meet an acceptable standard and perhaps Franklin's Gull *Larus pipixcan* and Sooty Shearwater *Puffinus griseus* need further confirmation though each is supported by photographic evidence. Though the Japanese Snipe *Gallinago hardwickii* is included on the basis of mist-netted birds identified as such in the Pilbara, only the Pin-tailed Snipe *G. stenura* has since been collected there. Surely the cyclone-caused occurrence of a Koel *Eudynamis scolopacea* near Quairading, south-western Australia, is inappropriately termed 'wrong-way' migration?

Much literature has been overlooked or ignored. This is quite evident in the distributional accounts on *Lophophaps ferruginea* (which does occur outside the Pilbara, viz in south-western Kimberley), *Pezoporus occidentalis* (a recent probable sighting in eastern Pilbara (West. Aust. Nat. 12: 11) not mentioned), *Porzana fluminea* (occurrence at Onslow based on specimen (West. Aust. Nat. 10: 73) omitted), *Amytornis striatus* (map and data in Emu 74: 185 not utilized) and *Rhipidura fuliginosa* (see Emu 71: 108). The paper on distribution of *Pachycephala gilberti*, etc., in the Great Victoria Desert (Ford, Emu 71: 27) has been largely ignored; so also has the paper on speciation in the wedgebills (Ford and Parker, Emu 73: 113), judged from the lack of any mention of the former occurrence of *Psophodes occidentalis* on the Nullarbor Plain and of the different songs of the eastern *P. cristatus*, besides the use of the wrong specific appellation. Other localities additional to Mungilli Claypan where *Malurus callainus* and *M. splendens* hybridize have been recorded (Ford, Emu 75: 153). *Calyptrorhynchus magnificus* has a population in the upper de Grey River drainage (pers. obs.) as well as populations in the Kimberley and South-West.

Numerous departures from the new Checklist of the Birds of Australia: Non-passerines (Condon 1975) and Interim List of Australian Songbirds (Schodde 1975) are evident. Sensibly, *Meliphaga* instead of *Lichenostomus* is retained for the 'plumed' group of honeyeaters. The dilemma created by Condon in merging congenerically the two stone-curlews—causing the Bush Stone-curlew rather than the larger-billed Beach Stone-

curlew to have the specific name *magnirostris*—is avoided. Parker's (Emu 72: 157) convincing evidence that the Dusky Grasswren *Amytornis purnelli* is ecologically and reproductively distinct from the Thick-billed Grasswren *A. textilis-modestus* is not followed, and data that *Cinclosoma alisteri* is not conspecific with *C. castanotum* and is probably closest to *C. cinnamomeum* (Ford, Emu 74: 80; Proc. XVI Int. orn. Congr.: 542) are ignored. Macdonald's suggestion (Emu 67: 283) that *alisteri* is a subspecies of *castanotum* is mere speculation. Also, *marginatum*, not *castaneothorax*, is the correct name for the western subspecies of *C. cinnamomeum*. Mees's work on apparent intergradation between *Cacatua sanguinea* and *C. tenuirostris* (J. Proc. R. Soc. West. Aust. 44: 102) ought to have been mentioned, at least when dealing with field differentiation between these forms. The Tawny-crowned Honeyeater is unfortunately kept in *Gliciphila* when it seems to be a *Phylidonyris*. The Black Honeyeater is kept in *Myzomela* and thus generically apart from the Pied Honeyeater *Certhionyx variegatus*, presumably because similarities in coloration are considered to be superficial and their nests and eggs are quite different. The removal of the Grey Honeyeater from *Conopophila* and return to *Lacustroica* focuses attention on uncertainty regarding its true position. Several forms have been treated as species whereas the weight of evidence supports only subspecific status: *Lophophaps ferruginea*, *Pardalotus substriatus*, *Neositta pileata*, *Sericornis maculatus*, *Malurus callainus*, *Malurus leucopterus*, *Eopsaltria griseogularis* and *Gymnorhina dorsalis*. This is of little significance in a handbook of this kind providing possible relationships and status are discussed. There are some minor errors in spelling of scientific names and *Phaps chalcoptera* is used for the Brush as well as for the Common Bronzewing.

In spite of a claim to the contrary in the section on bird geography, the zoogeographical concept used seems rather static. One is left with the impression that during evolution Bassian species give rise to only Bassian ones and Eyrean to only Eyrean when it is clear from Keast's speciation studies (Bull. Mus. comp. Zool. Harvard 123: 305) and my own (Emu 74: 161) that inland and dry-country forms repeatedly budded off from wet-country ancestors during the pluvial-arid cycles of the Pleistocene. The question whether certain south-eastern Australian forms (such as the Striated Pardalote, Superb Blue Wren, Orange-winged Sittella, Brown Thornbill and Spotted Quail-thrush) may have once occurred in the south-west suggests some lack of understanding of the speciation process. There seems no doubt that the Red-tipped and Striated Pardalotes and other such west-east pairs evolved from a common parental form in each case, probably in south-western and south-eastern Australia respectively, after the parent had been split into isolated populations by a geographical barrier in the region of the Nullarbor Plain or Spencer Gulf and that subsequently the western form, with its greater tolerance of arid conditions, expanded inland and eastwards.

Now that Australian ornithologists have a field guide (Slater 1970, 1974) and a comprehensive book (Reader's Digest Complete Book of Australian Birds, 1976), both of high standard, certain deficiencies in Serventy and Whittell become more apparent. These

include the paucity of illustrations in colour and the lack of small maps giving a quick view of each species's distribution. The map of place names is now virtually useless, not having been revised since the first edition though numerous new localities are in the text. For this book to retain its high status in the future these deficiencies must be rectified and much more detailed information on nesting, migration, behaviour, moult, juvenile plumages, ecology (including habitat) and evolution ought to be incorporated.

Julian Ford

The Atlas of Breeding Birds in Britain and Ireland compiled by J. T. R. Sharrock, 1976. Berkhamsted: T. & A. D. Poyser for British Trust for Ornithology and Irish Wildbird Conservancy. Pp 477, b. & w. ills 208, maps 273. 200 x 264 mm. £9.00 (available from publishers at 281 High Street, Berkhamsted, Herts. HP4 1AJ, UK). Separate set of twelve overlays, £1.50 (from BTO, Beech Grove, Tring, Herts. HP23 5NR, UK).

This was the first bird atlas to be started anywhere in the world. I vividly remember the mixed feelings of ornithologists when it began in 1968. Surely it would be impossible to obtain complete coverage of the whole of the British Isles including the remote parts of Wales, Scotland and Ireland. In this book we see that the impossible was achieved. Every ten-kilometre square was visited and most were surveyed so thoroughly that few of their resident species can have escaped detection. Confirmation of breeding proved far easier than expected, mainly by observing adults feeding newly fledged young late in the breeding season. The distribution maps for all common species show a solid array of 'confirmed breeding' dots, no doubt arousing the envy of Australian atlas organizers. And a great deal of pleasure and new knowledge were gained by fieldworkers in the process.

This is therefore a very complete record of breeding distribution in the British Isles from 1968 to 1973. It is also a pleasure to read. The book's design by Trevor Poyser, the quality of production and the information that the text contains do credit to the diligence of the fieldworkers. A foreword by James Ferguson-Lees (Chairman of the Atlas Working Group) discusses the history of atlasing projects and the details of this scheme are recorded fully in the introduction by Dr Sharrock. Full-page maps are given for 208 of the 229 species that breed in the area. Smaller maps are given for some of the remaining twenty-one (rarer) species at the end of the book. Distribution is shown with three grades of red dot: for possible, probable and confirmed breeding. A very few records were treated as secret and plotted conventionally on a larger grid.

The map of each species is accompanied by a page of text, mainly by Sharrock, with a vignette by one of a group of distinguished bird artists headed by Robert Gillmor. The text discusses the bird's ecology in relation to its present and past distribution; supplementary maps at the end of the book show the known historical ranges of twenty-five species. Each text draws on a wealth of detailed knowledge from published and unpublished sources and ends with an estimate of the total British population of the species. Results of the BTO Common Birds Census are used extensively. In Australia, this sort of information is available for only a few species and localities.

Interpretation of the maps is aided by a series of twelve transparent overlays (which appear to have shrunk by about 0.2%). They show county boundaries and environmental factors such as summer and winter temperatures, rainfall and presence or absence of fresh water, high country and vegetational types. They will

be useful for readers with no personal knowledge of the area but will have wider use in helping to identify which factors are most important in limiting the ranges of species; the distributions of many species are clearly related to combinations of these factors.

Now we in Australia have embarked on a similar project, on an even grander scale. The remote parts of Scotland pale into insignificance beside the uninhabited interior of central Australia. Our project will therefore be different but we can still learn much from this Atlas. Some comparisons between the two schemes need to be made.

First, the Australian scheme covers a whole continent and will deal with about 700 species. For many of them it will show not just local but world distribution. The distribution of birds in Australia is less known than it was in Britain before the Atlas and exploration should reap even greater rewards in terms of new knowledge. It will be specially useful because habitats have been altered less here than in most parts of Britain.

In Britain and Ireland 3,862 ten-kilometre squares were surveyed and in Australia there are about 900 degree-blocks. Degree-blocks are about a hundred times larger than ten-kilometre squares (more in northern Australia) but surveying them does not require a commensurate amount of extra effort. The British scheme involved over 10,000 field observers and about 150 regional organizers but most of the records came from 1,500 dedicated observers; in Australia there are now (August 1977) about 2,000 observers altogether.

The regional organizers did an essential job both in collating data and in organizing fieldwork. The Australian scheme has been designed from the start to process data by computer but so far there has been relatively little organization of fieldwork (largely because rural observers are widely scattered). Finally, the scheme in Britain and Ireland was concerned only with breeding distribution whereas the Australian scheme is just as rightly concerned with total distribution. It will therefore be all the more important for the final atlas to show or explain where birds do and do not breed and where they occur seasonally or as vagrants. In Australia atlasing will be a year-round activity, giving more time to achieve a satisfactory coverage. In the meantime we must admire the excellence of this Atlas and let it be an inspiration to us.

Richard H. Loyn

The Birds of the Malay Peninsula, Volume V: Conclusion, and Survey of Every Species by Lord Medway and David Wells, 1976. London: Witherby, in association with University of Malaya Press, Kuala Lumpur 22-11, Malaysia. Pp xxxi + 448, col. pll (by H. Grönvold) 25, figs 7, maps 7. 190 x 280 mm. \$M115.00/£25.00/\$US50.00.

This book completes a five-volume series which has had a long gestation and survived many vicissitudes. Volume I 'The Commoner Birds' by Herbert C. Robinson was published in 1927. He planned four more volumes: Volume II, 'The Birds of the Hill Stations'; Volume III, 'Sporting Birds, Birds of the Shore and Estuaries'; Volume IV, 'Birds of the Low-Country Jungle and Scrub'; and Volume V, 'Open Country and Ricefield Birds, Migratory Birds and Species not included in previous volumes, Keys to all the forms from the Peninsula and a General Index to all the volumes'. However, he died shortly after Volume II appeared in 1928 and it was left to F. N. Chasen to complete Volume III in 1936 and Volume IV in 1939. The Japanese invaded Malaya in 1941 and Chasen was drowned during the evacuation of Singapore. He had outlined his plans for

Volume V in the preface to Volume IV but his manuscript was presumed to be lost. After the war E. Banks, former Curator of the Sarawak Museum, wrote a replacement text and deposited it in the British Museum (Natural History). In 1964, Ken Scriven, a long-time resident of Malaysia, was in London and quite by chance discovered not only Banks's text but also the coloured plates by H. Grönvold. He informed Lord Medway and David Wells who in turn decided to complete the series. Witherby, publisher of Volumes I to IV, agreed to produce Volume V using typesetting, paper and layout identical with the previous volumes and in 1976 the task was completed, almost fifty years after its inception.

The authors have revised and updated Banks's text and, because Volumes I to IV are almost priceless, have amended Chasen's original intentions so that Volume V can stand on its own. There are three introductory chapters. In the first, Wells surveys the distribution, diversity and population dynamics of 460 species of resident birds. They occupy a wide variety of habitats ranging from off-shore islands to montane forest, but nearly fifty per cent of them live in lowland jungle, many more than in any other habitat, and several theories how this is possible are reviewed. This chapter, dealing with the ecology of Oriental birds, is most interesting because its subject has been neglected but it is marred by bad writing. The second chapter, by Medway, is more readable and examines the origin, migratory behaviour and wintering ecology of 215 species of migrants or non-breeding visitors. Much has been learnt in recent years by banding programmes in Malaysia and other parts of Asia; there have also been many more ornithologists available to observe migration of diurnal species (such as raptors) that would not normally be netted. Several intensive studies have discovered much about dates of migration, behaviour of migrants in their winter quarters, moult and interaction with resident species. The same theme is continued and in some cases duplicated in the third (and best) chapter on the Eastern Palaearctic Migration System by Ian Nisbet. One unexplained question is what factors cause migrants, wintering in an environment with almost constant climatic conditions, to return north to breed. The author discusses three theories: a biological time-clock, subtle climatic or biological indicators of season and astronomical cues.

The Systematic section summarizes what is known of the distribution and status, breeding or migration cycles, moult, longevity and voice of all 675 species known to have occurred in the Malay Peninsula south of latitude 10°N (which includes the Isthmus of Kra) up to the start of 1974. This section is uneven, because some species are much better known than others and full descriptions are given only to those species not covered in previous volumes. This means that within a family some species are fully treated and some hardly at all. The gazetteer is useful (though incomplete) but the map of the Peninsula is not detailed enough to be of any practical value. Grönvold's plates (surprisingly he receives no acknowledgement in any of the five volumes) are not as good as in previous volumes and look like left-overs. Plate 20 of the Chinese Starling *Sturnus sinensis* bears more than a passing resemblance to the Chestnut-tailed Starling *S. malabaricus*.

Robinson and Chasen's original four volumes, being arranged by habitat and not in systematic order (cf Cayley's *What Bird is That*), are exasperating to use and, being incomplete, leave unresolvable doubts in a reader's mind. This fifth volume has been a desired completion for forty years. For libraries with Vols I-IV

it will transform an awkward curiosity into a useful complete work of the birds of the Malay Peninsula. Lucky individuals who bought the original four volumes for £7.00 will be tempted to lay out £25 for the same purpose but libraries and individuals who are without the first four volumes may find Volume V an expensive form of checklist, annoyingly uneven without the other four volumes in much the same way as the first four are without the fifth.

D. G. Robertson

PAPER

Birds in Pine Forests by P. M. Davidson, 1976. Department of the Capital Territory Studies in Forest Environment No. 1, Canberra: Aust. Govt. Publishing Services. Pp iv + 69, tables 10, fig. 1, maps 5, b. & w. pl 26. \$3.70 (available from Government Bookshops).

This paper reports a brief (three-month) study of the occurrence of birds in pine plantations and in native vegetation within the one forest near Canberra. The author studied three plantations of different ages and compared them with native forest. Lists of species and behavioural observations were also collected in other types of vegetation.

As found in other States, individual compartments of pines supported fewer species of birds than native vegetation and the least number of species was found in closed unthinned plantations (aged c. 15 years). The general conclusion that the diversity of avian species was related to vegetational diversity (compartment age, structure and amount of undergrowth) agrees with the findings of other workers. However, a comprehensive review of the Australian and overseas literature would have added weight to this conclusion.

A criticism of this paper is that Davidson had to use large census plots (12-18 ha), varying numbers of visits and rather short periods of observation. These are major sources of error, which could have influenced both the results and the conclusions. Nevertheless, the results indicate differences in composition and abundance of species between the exotic and native forests. A discussion of these differences would have emphasized the influence of vegetational diversity (structure and number of species) on various species of birds and would have indicated that a mosaic of plantations of different ages can provide habitats for a greater variety of birds.

This and most other studies of fauna in pine forests in Australia have considered plantations intermingled with native vegetation. They have all concluded that areas of native vegetation both within and adjacent to pine plantations are important to conserve the diversity of wildlife. Now, attention needs to be given to areas of pure pine plantation remote from sources of native vegetation. Such areas could be used as controls for plantations containing native vegetation, to assess the value of these small areas of native forest.

The observations of foraging reported in this study offer a significant contribution which supports observations made in other exotic forests and permits comparisons with the same or similar species of birds in other States. The main value of the paper is that it allows comparisons with data from plantation systems in other States and extends the known ranges of occurrence of many species of birds in the Australian Capital Territory.

B. C. Gepp

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